Neuron Tracing Methods in NeuTu

Ting Zhao
Janelia Research Campus, HHMI, USA

***Abstract*— In this talk I will present two neuron tracing methods, one developed several years ago and one developed more recently, used in our neuron tracing software called NeuTu (https://github.com/janelia-flyem/NeuTu). Based on some specific assumptions, our methods are variants of traditional tracing approaches such as model fitting and shortest path searching. I will discuss about the strength and weakness of the methods based on the results of tracing BigNeuron dataset. While these methods can be used in a fully automated way, like their plugin versions ported into Vaa3D, we are more interested in using them to assist interactive neuron reconstruction. Therefore, I will also show some semi-automated functions which are derived from these methods and available in the GUI interface of NeuTu.**

***Index Terms*—neuron tracing**